

Kaiser Aluminum NPDES Permit – WA 000093-1

Response to Comments for Draft Permit Reissuance October 10, 2001

Listed below is a summary and response to comments submitted to Ecology for the Draft NPDES Permit reissuance for Kaiser Tacoma's aluminum smelter:

Summary

- *Comments 1-63 submitted via letter dated December 14, 1999 from Kaiser Aluminum, Northwest External Affairs.*
- *Comment 64 submitted via letter dated December 14, 1999 from Puget Soundkeeper Alliance.*
- *Comments 65-68 submitted via letter dated December 15, 1999 from Citizens for a Healthy Bay.*

Comments

Comment # 1 – The second paragraph of this section lists sources of water that the Permittee is authorized to discharge. Please add to the list maintenance garage wash water and Rectifier Station oil/water separator discharge water.

Response # 1 – These sources were identified on the permit application and have pollutants similar to the facility's other sources. Ecology will add these sources to the list in section S1.A.

Comment # 2 – With respect to the Effluent Limitations for Outfall 001, several comments are provided of both a general nature and of a pollutant specific nature. In the case of effluent limitations for Total Suspended Solids (TSS), Fluoride (F), and Aluminum (Al), the Fact Sheet states that the data for the calendar years 1996 and 1997 were "statistically analyzed at the 99 and 95 percent confidence levels to derive daily maximum and monthly average limits, respectively." Fact Sheet, page 8. This methodology, based on EPA guidance found in Appendix E to the Technical Support Document for Water Quality-Based Toxics Control, was designed for industrial process wastewater that exhibits certain statistical properties. Outfall 001 is a combined stormwater and process water outfall. The proportion of the total volume of the discharge that constitutes stormwater varies dramatically on a seasonal and daily basis. For this reason, Outfall 001 data does not satisfy the statistical prerequisites for application of Appendix E. Specifically, daily measurements are not independent, nor are they normally or lognormally distributed.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Response # 2 – Ecology reviewed the permit limit derivation process for aluminum, total suspended solids and fluoride in the proposed permit and performed a statistical check to determine whether or not the log-transformed data was normally distributed. The analysis demonstrated that it was not. Because the weekend samples are composited it was not possible to perform an autocorrelation check. The permit limits have been revised based on a non-parametric analysis of effluent data from February 1998 through 2000, which is more representative of the current discharge. Ecology removed the January 1998 data from the analysis because Kaiser inappropriately “salted” the roads with alumina during an ice storm, which increased the TSS levels considerably. The monthly average value chosen for each parameter was the 95th percentile value of the monthly average values reported to Ecology. The daily maximum value chosen for each parameter was the 99th percentile value of all of the February 1998 through 2000 daily values excluding the weekend samples.

Comment # 3 - The application of Appendix E methods to derive effluent limits from data set that do not satisfy the method’s distributional assumptions yields limits that the permittee will violate more frequently than the 99 and 95 percent confidence levels specified by the method. The Washington Permit Writers Manual acknowledges this problem at page IV-82. Application of the proposed TSS, aluminum and fluoride limits to Kaiser’s actual monitoring data from 1996 through 1999 confirms that the proposed limits would yield more violations than the method was intended to predict. The limits yield unacceptable rates of non-compliance. (It should be noted that in February 1998, the required Outfall 001 pumping system was completed and the full impact of major storm events became measurable. In addition, operational levels were at 75% beginning in September 1998.) The non-compliance projections are shown in the following table.

Effluent Limitation Calculation Comparisons					
(All values are in pounds per day)					
Limitation	Parameter	1996	1997	1998	1999
Monthly Av	F	0	1	2	3
Monthly Av	TSS	0	2	1	0
Monthly Av	Al	0	1	3	2
Daily Max	F	1	0	10	3
Daily Max	TSS	2	4	12	1
Daily Max	Al	0	0	7	2

Response # 3 – See response #2. Since Ecology reevaluated the permit limits the exceedance levels stated by Kaiser are no longer applicable. If Kaiser continues to operate as it has during 1998 through 2000 then there will be some permit exceedances, presumably one percent of the daily values will exceed the daily maximum and five percent of the monthly averages will exceed the monthly average value. Ecology will use its discretion when making a decision to enforce when a violation occurs.

Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001

Comment # 4 - Kaiser reviewed daily precipitation data for the days on which Tacoma recorded a value for TSS, Al or Fluoride above the proposed limits in the draft permit. The following table shows that with few exceptions, values exceeding the proposed limits were recorded only on days in which the Tacoma Works recorded substantial precipitation.

Fluoride Violation Analysis Daily Maximums					
Year	Date	Proposed Limit (lbs/day)	Actual Discharge (lbs/day)	Actual Flow (MGD)	Dry Weather Flow (MGD)
1996	25 Oct	170	193	1.50	0.73
1997					
1998	21 Nov	170	228	2.10	0.73
	22 Nov	170	286	2.64	0.73
	23 Nov	170	281	2.59	0.73
	24 Nov	170	185	2.22	0.73
	26 Nov	170	182	2.70	0.73
	27 Nov	170	323	2.77	0.73
	28 Nov	170	414	2.76	0.73
	29 Nov	170	392	2.61	0.73
	30 Nov	170	222	1.48	0.73
	03 Dec	170	175	2.18	0.73
1999	15 Jan	170	186	1.86	0.73
	18 Jan	170	182	1.98	0.73
	19 Jan	170	229	2.11	0.73
Dry weather flow is average of July, August, and September for 1996-1999					

Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001

Total Suspended Solids Violation Analysis Daily Maximums					
Year	Date	Proposed Limit (lbs/day)	Actual Discharge (lbs/day)	Actual Flow (MGD)	Dry Weather Flow (MGD)
1996	12 Feb	250	269	2.04	0.73
	02 Dec	250	281	0.44	0.73
1997	21 Apr	250	295	1.07	0.73
	24 Apr	250	318	0.92	0.73
	25 Apr	250	307	0.98	0.73
	22 Dec	250	289	1.05	0.73
1998	05 Jan	250	561	0.97	0.73
	08 Jan	250	261	0.88	0.73
	12 Jan	250	683	0.33	0.73
	13 Jan	250	593	0.54	0.73
	14 Jan	250	593	0.62	0.73
	20 Jan	250	889	0.86	0.73
	21 Jan	250	734	0.83	0.73
	22 Jan	250	642	0.71	0.73
	23 Jan	250	437	0.57	0.73
	27 Jan	250	353	0.61	0.73
	28 Jan	250	412	0.55	
	29 Jan	250	369	0.55	0.73
					0.73
1999	29 Jun	250	277	0.81	0.73
January 1998 data was impacted by the use of alumina during an ice storm for traction materials for plant vehicles					
Dry weather flow is average of July, August, and September for 1996-1999					

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Aluminum Violation Analysis Daily Maximums					
Year	Date	Proposed Limit (lbs/day)	Actual Discharge (lbs/day)	Actual Flow (MGD)	Dry Weather Flow (MGD)
1996					
1997					
1998	21 Nov	50	60	2.10	0.73
	22 Nov	50	75	2.64	0.73
	23 Nov	50	74	2.59	0.73
	27 Nov	50	86	2.77	0.73
	28 Nov	50	108	2.76	0.73
	29 Nov	50	102	2.61	0.73
	30 Nov	50	58	1.48	0.73
1999	19 Jan	50	55	2.11	0.73
	12 Nov	50	59	1.98	0.73
Dry weather flow is average of July, August, and September for 1996-1999					

Response # 4 – See response #2 and #3.

The data Kaiser has presented here does support pollutant loading associated with flow, which may be directly or indirectly associated with precipitation. Ecology has also reviewed the four years of data from the Daily Monitoring Report (DMR) submittals and has observed numerous days with high flow and precipitation when no exceedances occurred. This supports the position that implementation of a Stormwater Pollution Prevention Plan (SWPP) including applicable BMPs may lead to lower pollutant loading during high flows and precipitation. The January 1998 data should not be included in Kaiser's analysis. As Kaiser has noted, in January 1998, the Tacoma Works used alumina during an ice storm for traction material. Since alumina ore has a very small particle size and is easily transported by stormwater runoff, this practice was not an acceptable BMP for stormwater, is not a common industry wide practice, is an atypical loading of pollutants (TSS and F), is not an acceptable practice, and must not occur again.

Comment # 5 - As a practical matter, exceedances of the proposed Outfall 001 TSS, F and Al limits will occur principally as a results of stormwater runoff. For the reasons noted above, Appendix E statistical methods should not be used to

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

derive effluents limits for Outfall 001. Instead, Kaiser urges Ecology to retain the effluent limits for TSS, F, and Al that were imposed in the 1990 permit.

Response # 5 – See Response # 2 & 3.

Comment # 6 - If Ecology determines to apply Appendix E methods notwithstanding the failure of the data set to satisfy Appendix E statistical prerequisites, Kaiser also has questions about how Ecology derived the limits shown in the draft permit. Kaiser tried to derive the permit limits by applying the Appendix E formulae to the 1996 – 1997 data set used by Ecology. However as is shown in the following table, Kaiser was not able to duplicate Ecology's calculation on a consistent basis.

Effluent Limitation Calculation Comparisons			
(All values are in pounds per day)			
Parameter	Data Set	Kaiser	Ecology
TSS	Daily Max	288	250
F	Daily Max	163	170
Al	Daily Max	50	50
TSS	Monthly Avg	114	90
F	Monthly Avg	59	52
Al	Monthly Avg	13	10

Response # 6 – See responses #2 & #3. The data analysis completed by Kaiser Tacoma is no longer applicable. However, Kaiser may not be aware that Ecology did eliminate some data points in the 1996 – 1997 data set in the original analysis. Those data points included the weekend 3-day composite samples, which would tend to average out any maximum values that occurred during that three day time period. Either the data sets used by Kaiser and originally by Ecology are different or the calculation has some subtle difference.

Comment # 7 - Kaiser respectfully requests that Ecology either review its own calculations, or provide Kaiser with the data needed to track Ecology's derivation of the limits proposed for the permit.

Response # 7 – Since the original analysis is no longer being used to derive permit limits it is no longer applicable. Ecology will provide Kaiser with the original data analysis if requested.

Comment # 8 - Kaiser respectfully requests that the existing effluent limitations for Total Suspended Solids, Fluoride, and Aluminum be retained until such a time as a technology change is made that would change the capability of the facility's treatment system.

Response # 8 – Ecology denies this request. See Responses # 2,3, 4, and 5.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Comment # 9 – The cyanide effluent limitation proposed in the permit presents several concerns. First the permit does not specify the applicable test method, or quantitation limit for that test method. Kaiser assumes that Ecology intends to retain Method 4500CN-I, the method specified in the 1990 permit for analysis of free cyanide. To avoid confusion the permit should specify the applicable test method.

Response # 9 – Ecology agrees to specify the test method in the NPDES permit. The method is Weak Acid Dissociable Cyanide, Method 4500-CN-I. Standard Methods for the Examination of Water and Wastewater, 19th Edition.

Comment # 10 – Assuming that Ecology intends Kaiser to use Method 4500-CN-I, the proposed permit limit is well below the quantitation level (QL) of the method. As Ecology knows from the Intalco permit appeal, the generally accepted inter-laboratory quantification level for Method 4500-CN-I is 0.020 mg/l. The permit should specify both the QL and the MDL for the prescribed method. Kaiser would accept the footnote that Ecology agreed to propose for the Intalco permit: “Cyanide measurements below 0.020 milligrams per liter shall be deemed to demonstrate compliance with the daily maximum permit limitation for cyanide.”

Response # 10 – Ecology’s laboratory has identified the quantitation limit for Method 4500-CN-I to be within the range of 0.01 to 0.02. Ecology’s laboratory’s method detection limit is 0.002mg/l. Kaiser has also demonstrated the ability to meet this detection level in the data already submitted to Ecology. Ecology’s position is that if a permittee has demonstrated that it can achieve a detection limit for a parameter in their specific matrix than they should be able to continue to do so. Therefore the MDL is 0.002 and the QL is 0.01 mg/l. We will add the following standard boilerplate language to the permit to replace footnote number 1 on page 6 of the permit:

(1) The method detection level (MDL) for cyanide is 0.002 mg/L using method number 4500CN-I. The quantitation level (QL) for cyanide is 0.01 mg/L (5 x MDL).

This QL will be used for assessment of compliance with these effluent limits. If the Permittee is unable to attain the MDL and QL in its effluent due to matrix effects, the Permittee shall submit a matrix specific MDL and QL to the Department by (nine months after effective date). The matrix specific MDL and QL shall be calculated as follows:

MDL = 3.14 x (standard deviation of 7 replicate spiked samples). This corresponds to the calculation of the method detection limit, as defined in 40 CFR Part 136, Appendix B, with the provision that the MDL be calculated for a specific effluent matrix.

The QL = 5 x MDL

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Check standards at concentrations equal to the QL shall be analyzed alongside all compliance monitoring samples. Check standards shall be produced independently of calibration standards and maintained as a part of the Permittee's records. All check standard recovery data and duplicate measurements shall be submitted to the Department in the discharge monitoring report. The Department's precision goal is +/- 20%.

Footnote 2 states "If the measured effluent concentration is below the QL as determined in Footnote #1 above, the Permittee shall report NQ for non-quantifiable." A value that is non-quantifiable is not out of compliance since the permit limit of 0.01 mg/l is at the quantitation level of 0.01mg/l. A value above the quantitation limit is above the permit limit and is a violation. We see no need to vary from the standard boilerplate language.

Comment # 11 – The effluent limitations for Cyanide, Benzo (a) pyrene, and PCBs each reference footnotes numbering 1 through 5. The intent of footnote 1 is to require the development of a laboratory specific QL. Quantitation levels are set for NPDES permits on an inter-laboratory basis, not a lab-specific basis. Gary Bailey's deposition testimony on this point from the Intalco permit appeal is submitted as Attachment A to these comments. It is Ecology's responsibility to designate in the permit the QL for the test method referenced in the permit. That number should be 0.020 mg/l.

Response # 11 – Ecology agrees to add the QLs as requested. See Response # 10. The QL for cyanide (Method 4500-CN-I) will be referenced in the permit as 0.01 mg/l. The MDL for Benzo (a) pyrene in water (Method 625) is .0025 mg/l (CFR Part 136); therefore the QL is 0.0125 mg/l. The MDL for PCBs in water (Method 608) is 0.065 mg/l (CFR Part 136); therefore the QL is 0.325 mg/l. The intent of footnote #1 is to allow laboratories to develop lab specific MDL's in cases where the sample matrix interferes with the lab's ability to meet a MDL in the acceptable range.

Comment # 12 – Kaiser supports the need for footnote 2, provided that the footnote is revised to reference the inter-laboratory QL describe above.

Response # 12 – See Response # 10 and #11.

Comment # 13 - Footnotes 3, 4, and 5 should be deleted. These notes provide instructions for the use of data below the MDL in computing the monthly average number for a parameter. But the permit contains no monthly average limits for any of the parameters for which Ecology has specified the use of footnotes 3, 4, and 5. These instructions are not needed for this permit.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Response # 13 – Ecology agrees to remove footnotes 3, 4, and 5 from Kaiser Tacoma’s permit.

Comment # 14 – With respect to the effluent limitation for PCBs, for more than a decade Kaiser has monitoring and reported PCB data. Over the past five years, monitoring data (actual monitoring rate has been three times as frequently as required) has shown that 57 of 60 samples taken have produced results below a detection limitation of 1 micrograms per liter (ug/l). Of the three samples above the detection limitation, only one was above the quantitation limit and did not approach the permit limitation. As a result, Kaiser respectfully requests that Ecology delete the effluent limit for PCB, since the lack of an on-going need has been demonstrated and the requirement to continue to operate the ground water cleanup system (oil/water separator) remains in place. As discussed elsewhere, the permit needs to specify the applicable test method, and the MDL and the QL for it.

Response # 14 – Ecology agrees to reduce the monitoring frequency to quarterly as required in the last permit cycle. We do not agree to remove the requirement from the permit. As specified in response #11 the method will be added to the permit language.

Comment # 15 – The pH limit for Outfall 001 includes footnote “c”, which specifies a limited allowance for short-term excursions. Kaiser appreciates Ecology’s recognition that algae causes excursions beyond 6.0 and 9.0 pH units in the settling basin and that these excursions are not effluent limitation violations. However, Kaiser believes that it is inappropriate for Ecology to have limited these excursions to a range of 5.0 to 10.0 pH units. Kaiser has provided monitoring data that shows algae growth has driven pH values above 10.0 pH units.

Kaiser also provided a consultant’s report that showed that there would be no water quality impacts for discharges approaching 12.0 pH units. This 5.0 to 10.0 pH unit bracketing should be either moderately expanded or dropped completely since it is not a component of EPA’s 40 CFR 401 General Provisions.

Response # 15 – Ecology will not relax this provision. The 5-10 unit bracketing is a technology-based limit and not a water quality-based limit. A facility at AKART should meet technology-based limits when properly operated. For a prospective of other concerns for pH see Comment # 65 and Response # 65.

Comment # 16 – Ecology has proposed a monthly average limitation for Oil & Grease where one previously did not exist. Kaiser has reported more than 1800 daily maximum data points for this parameter over the last seven years. In this large data set, there are only four daily maximum values that exceed the proposed monthly average limitation. There was no month in which the average of daily values even approached the proposed monthly limit. Kaiser respectfully

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

requests that this proposed limitation be dropped as there is no environmental or other need for it.

Response # 16 – Ecology elects to retain this limit, which is a performance-based standard and this limit has been included in the majority of the aluminum permits issued to date.

Comment # 17 – With respect to monitoring frequencies for Total Suspended Solids, Fluorides, and Aluminum, the continued requirement to monitor seven days per week is unjustifiable based upon EPA's guidance issued in April 1996 (EPA 833-B-96-001). Monitoring, at most, should be three days per week based upon past performance being in the range of 49% to 25% of the monthly average limitations for these parameters. Kaiser respectfully requests that Ecology follows EPA's guidance and revises the monitoring schedule to three times per week for these three parameters.

Response # 17 – Kaiser Tacoma is not eligible for reduced monitoring frequencies because it is under administrative order to upgrade the treatment facilities. When the facility has completed treatment plant improvements we could consider monitoring reductions. Practically speaking this will generally only occur during the process of permit reissuance. In addition, Ecology elects not to reduce these monitoring frequencies since these pollutants are considered pollutants of concern and indicator parameters at aluminum smelters.

Comment # 18 – Notwithstanding the above request, Ecology has stated the need for system indicator parameters. Since the treatment system at the facility is gravity settling of solids, Total Suspended Solids would be the likely indicator parameter for system performance. The graphs in Figures 1 and 2 show the relationship between Fluorides and Total Suspended Solids and Aluminum and Total Suspended Solids. As can readily be seen each Figure, there exists a strong enough relationship between parameters that Total Suspended Solids can adequately serve the function of an indicator for Fluorides and Aluminum performance. Furthermore, there is no water quality basis for effluent limits for fluoride or aluminum. As such, there is no need to monitor all three parameters on a daily basis. Should Ecology choose not to follow EPA guidance, the monitoring for Fluorides and Aluminum should be reduced to three times per week.

Response # 18 – Ecology denies this request. See Response # 17.

Comment # 19 – With respect to Benzo (a) pyrene monitoring requirements, Ecology proposes a seven fold increase in monitoring frequency over the existing permit without justification or explanation. Over the last 60 months (240 samples) monitoring for Benzo(a)pyrene has resulted in approximately 90% of the data being below the detection limitation with all but a handful of the remaining results being below the quantitation limitation. None of the results has

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

approached the existing permit limitation. Based upon performance there is no rationale for the increased monitoring frequency that has been proposed. Kaiser respectfully requests that monitoring for Benzo (a) pyrene be reduced to monthly based upon past performance.

Response # 19 – Ecology agrees to reduce this monitoring frequency to that of the previous permit, weekly.

Comment # 20 – With respect to PCB monitoring requirements, Ecology proposes a twelve-fold increase in monitoring over the existing permit without justification or explanation. Over the past 60 months (60 samples), monitoring for PCB has resulted in only three values above the detection limitation and only one above the quantitation limitation. None of these results approach the existing permit limitation. Based upon performance there is no rationale for increased monitoring frequency. Kaiser requested above, that Ecology delete the PCB effluent limitation from the permit. For the same reason as above, Kaiser asks Ecology to delete the PCB monitoring requirement.

The existing data set, coupled with the requirement for ongoing operation of the oil/water separator and recording of flow, provides reasonable assurance that harmful concentrations of PCBs are not being discharged at Outfall 001.

Response # 20 – Ecology agrees to reduce the monitoring frequency to quarterly as required in the last permit cycle. We do not agree to remove the requirement from the permit. As specified in response #11 the method will be added to the permit language.

Comment # 21 – Monitoring for Oil & Grease is proposed at seven days per week in the draft permit. Performance over the last 60 months (1300 samples) has been exemplary with only two samples above the quantitation limitation. Based upon this performance, Kaiser respectfully requests that monitoring for Oil & Grease be set at three days per week.

Response # 21 – Response # 17 denies use of the Monitoring Reduction for Exemplary Performance Policy because Kaiser has not yet complied with treatment plant upgrades. The upgrades are directed towards improving settling capability. O&G removal should not be significantly impacted by the upgrade requirements and is therefore eligible for consideration of reduced monitoring frequencies. In addition Ecology believes that the source of oil contamination is relatively minor and therefore Ecology agrees to reduce the monitoring frequency to three (3) days per week including one weekend day.

Comment # 22 – With respect to WET testing frequency, please see comments on Conditions S6 and S7.

Response # 22 – See Responses # 42 and # 46.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Comment # 23 – Footnote (a) in the Outfall 001 monitoring schedule addresses collection of PCB samples. In the second sentence of footnote (a), the word “reported” should be changed to “recorded”. The requirement to report the recorded data is elsewhere in the permit.

Response # 23 – Ecology agrees to make this correction.

Comment # 24 – With respect to the sample type for the parameter “Precipitation”, this sample is a 24-hour total not a 24-hour average. Please revise the Outfall 001 monitoring schedule accordingly.

Response # 24 – Ecology agrees to make correction.

Comment # 25 – With respect to the parameter “Aluminum Production”, the frequency column should state, “monthly” and there should be no entry in the sample type column. Kaiser currently measures aluminum production on a monthly basis and divides by the number of days in the month to calculate tons/day. The permit should incorporate this procedure.

Response # 25 – A footnote will be added to describe how Kaiser measures aluminum production on a monthly basis and divides by the number of days to estimate daily production.

Comment # 26 – Footnote (c) in the Outfall 001 monitoring schedule contains new language excusing monitor downtime resulting from factors beyond the permittee’s control. Kaiser appreciates Ecology’s willingness to address data recovery issues in the permit. Sample collection systems are computer controlled and as such are susceptible to the same “data recovery” issues as continuous monitors. This is not a significant issue when less than daily monitoring is required with a 24-hour composite sample type. However, when daily, 24-hour composite sampling is required, the monitoring frequency becomes “continuous”. As a result, Footnote (c) needs to apply to the sampling frequency column of the parameters Total Suspended Solids, Fluoride, Aluminum, Free Cyanide, Benzo (a) pyrene, and Precipitation.

Response # 26 – Ecology believes the proposed language covers Kaiser’s concerns. As with other permittees, Kaiser should have backup monitoring equipment, parts, compositors, and sampling probes. Ecology will not make these additional changes.

Comment # 27 – The current permit specifies that samples for Outfalls 003 and 004 are to be taken during the first two hours of a rainfall event. While at times this is a difficult requirement to comply with, the proposed permit requires that a sample be taken within the first 15 to 30 minutes of a storm event and continue for up to three hours unless the storm is shorter. This sampling requirement,

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

from a practicality standpoint, is virtually impossible for the facility to comply with. In addition, both Outfall 003 and 004 are a part of the Order No. DE 99 WQ-I016 AKART study that will ultimately will require major revisions to these Outfalls by October 2001. For these reasons, Kaiser respectfully requests that the sampling requirements remain unchanged from the current permit until such time that the modifications driven by Order No. DE 99 WQI016 are installed and operational.

Response # 27 – Ecology agrees to make some changes to this requirement. Grab samples must be collected within the first 60 minutes after discharge begins from a storm event that is greater than 0.1 inches of rainfall and at least 72 hours from the last measurable storm event. If such an event does not occur during a month, there is no requirement to submit stormwater data for the month. Kaiser may elect to analyze each drainage basin to determine the appropriate time period to achieve “first flush” capture. This analysis would have to be submitted for Ecology review and approval.

Comment # 28 – With respect to Outfall 005, the sampling requirement has been proposed to be modified in both location and sample type. The proposed location for sampling does not exist because only non-contact cooling water is discharged and as a result there are no locations to be sampled that are upstream of the addition of non-contact cooling water. Since only non-contact cooling water is discharged, the requirement to take three samples over a four hour period is unnecessary and unduly burdensome given the consistent nature of the groundwater used for non-contact cooling.

Response # 28 – After consideration Ecology elects to retain this requirement to verify the quality of the discharge. The sample location will be changed to Outfall 005. Ecology however does agree to change the sample type to grab samples.

Comment # 29 – A. Sampling and Analytical Procedures - This condition incorporates by reference the “latest revisions” of two analytical methodology reference sources. Ecology cannot incorporate by reference future amendments to publications or regulations. Ecology needs to reference by date the publication or regulation it is incorporating by reference.

Response # 29 – Ecology denies this request. This is standard boilerplate language. This allows Ecology and the permittee to stay current with new technology without reopening the permit.

Comment # 30 – S3. Reporting and Recordkeeping Requirements Reporting The fourth sentence of the first paragraph of this condition states that, “This report shall be received by the Department...”. This condition is unduly burdensome in that the only way the Permittee can be assured that it has complied with this requirement is to hand deliver the Discharge Monitoring Report (DMR) each month to the Department of Ecology. Kaiser respectfully requests that the words, “received by” be replaced by the words, “mailed to”.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Response # 30 – Ecology denies this request. This requirement is being met by other permittees and Kaiser should be able meet it also.

Comment # 31 – The second paragraph of Condition S3.A states that lab reports providing data for organic and metal parameters must include “the lab practical quantitation limit.” For reasons noted above, only inter-laboratory MDLs and QLs have regulatory significance. The Intalco NPDES permit, issued in 1998, directs the permittee to include “MDLs and QLs (when applicable)...”. This language is appropriate and should be used in the Tacoma permit.

Response # 31 – Ecology denies this request. The intent of this requirement is to have documentation of the MDLs and QLs for non-detect values. This was a new change in the NPDES boilerplate.

Comment # 32 – Condition S3.E (“Noncompliance Notification”) is a substantial revision to the language prescribed by 40 CFR 122.41(l)(6) and (7), and includes as general conditions in other aluminum smelter NPDES permits. The Intalco, Vandalco and Alcoa/Wenatchee NPDES permits contain identical noncompliance notification language, located in the General Conditions section of the permit. Kaiser does not understand what prompted Ecology to modify that language for the purpose of the Tacoma draft permit. The Tacoma-specific revisions present practical compliance problems, given that Kaiser typically does not learn of a permit exceedance until it receives a lab report, a week or more after the sampling event. Thus it usually is not feasible to “immediately notify the Department of the failure to comply,” nor would such notification have any value in protecting the environment. Language directing Kaiser to “repeat sampling and analysis of any violation immediately” makes no sense for the same reason.

Response # 32 – As has been referred to before in the responses to comments (# 14, # 19, and # 21), Ecology refined the NPDES permit boilerplate in 1997. Comparisons of specific conditions and the General Conditions in the Intalco, Vandalco and Alcoa/Wenatchee with Kaiser Tacoma’s permit are not a necessary reason for automatic changes. For this condition, immediately means as soon as Kaiser is made aware of non-compliance. Permittees should have an understanding or protocol with their environmental laboratories to notify to the environmental manager immediately when a test result may be in non-compliance with the NPDES permit. This allows quick response by the environmental manager and/or permittee. The resampling confirms a short term or continuing non-compliance issue. Ecology will retain this requirement.

Comment # 33 – Ecology’s rewriting of the federal NPDES permit boilerplate presents legal problem. Condition S3.E conflicts with Condition G12. The latter condition incorporates the provision of 40 CFR 122.41. As noted above, 122.41(1)(6) and (7) address the same subject matter as Condition S3.E, but impose different requirements. While S3.E generally is more burdensome than

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

the requirements in 122.41, S3.E does not pick up several requirements of the federal regulations. As a result, the permit could be challenged for omitting requirements imposed by EPA regulations.

Response # 33 – Ecology is delegated to run the federal NPDES permitting program. The boilerplates used by Ecology are not federal boilerplates. The revised language has been reviewed and accepted by Ecology's Attorney Generals. EPA and other parties are continually reviewing and commenting on NPDES permits issued by Ecology. The most recent permits have been issued with this same language as are in the Tacoma Works permit and Ecology has not received any challenge for this condition. Ecology will not make any changes to section.

Comment # 34 – Kaiser recommends that condition S3.E be move to the General Conditions section of the permit, and that it be revised to track verbatim the General Conditions on Noncompliance Notification included in the Intalco, Vanalco, and Wenatchee permits.

Response # 34 – Ecology denies this request. See Response # 32 and 33.

Comment # 35 – Condition S4 is another effort by Ecology to relocate and improve upon General Conditions boilerplate found in other NPDES permits, and prescribed by federal regulations. The first paragraph of S4 is a rewrite of General Condition G2 in the Intalco, Vanalco and Wenatchee permits. Kaiser cannot identify any substantive differences between this language and that employed in the other permits. We cannot understand what inspired Ecology to move and rewrite the language.

Response # 35 – Ecology denies this request. See Response # 32.

Comment # 36 – S4.A, the "operations and maintenance manual," is a re-write of the Treatment System Operating Plan condition included in the Intalco, Vanalco and Wenatchee permits. Whereas the other smelters are directed to operate and maintain their wastewater treatment systems in accordance with an operating plan, Condition S4.A requires Kaiser to obtain Ecology's approval for its operating plan. Whereas the other smelters are directed to update plans in the event of "major modifications" to the treatment system, Kaiser is required to review its O & M manual "at least annually." Unlike any other smelter, Kaiser's manual "shall conform to the requirements of WAC 173-240-150."

WAC 173-240-150 applies only to new and modified wastewater treatment plants that have undergone review pursuant to WAC ch. 173-240. Ecology offers no explanation for its decision to impose on Tacoma requirements that do not appear in any other aluminum smelter NPDES permit. Kaiser recommends that Condition S4.A be deleted, and that the standard NPDES Treatment System Operating Plan condition be included in its place.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Response # 36 – Ecology denies this request. All NPDES permits issued have some variation of an Operation & Maintenance (O & M) Plan. The other aluminum permits issued recently have a requirement for a Treatment System Operating Plan, which is very similar to the O & M plan required for Kaiser Tacoma. Kaiser is in the process of modifying the treatment system, which requires review and approval by Ecology per Ch. 173-240 WAC including O & M plan requirements. Authority to include O & M plans in NPDES exists in both federal and state laws and regulations. Chapter 173-220-150 (1) requires that operation and maintenance be addressed in NPDES permits.

Comment # 37 – Condition S4.B is a rewrite of the standard NPDES “bypass” condition that appears in Condition G5 in the Intalco, Vanalco and Wenatchee permits. The Tacoma version includes new requirements that do not apply to other permittees, including the demand that “ The Permittee shall immediately notify the Department of and spill, overflow, or bypass from any portion of the collection or treatment system.”

Under the federal NPDES permit regulations, “bypass” refers to an intentional diversion of waste streams around a treatment facility. See 40 CFR 122.41(m). Condition S5 would regulate a much broader universe of unintentional spills, overflows and diversions. As such it conflicts with Condition G12 of the Tacoma permit, which incorporates the federal definition of “bypass,” as well as the bypass language in most Washington NPDES permits. Ecology has provided no explanation for its proposal to rewrite the standard NPDES boilerplate on bypass. Kaiser is not aware that the Ecology Water Quality Program has invited permit writers to modify General Conditions language in a specific NPDES permit.

Kaiser recommends that ConditionS4.B be deleted in favor of the standard Condition G5 bypass provisions found in the Intalco, Vanalco and Wenatchee permits.

Response # 37 – Ecology denies this request. Ecology does not believe there is a conflict with Condition G12. See Response # 32 and 33.

Comment # 38 – S6 Receiving Water Study – Ecology proposes to require Kaiser to conduct a receiving water study to determine whether Tacoma effluent has a reasonable potential to cause a violation of water quality standards for copper, zinc, nickel, and arsenic. The receiving water study is unnecessary and should be deleted from the permit.

Response # 38 – Ecology denies this request. See Responses # 39 and # 40.

Comment # 39 – First, arsenic never has been detected in Kaiser’s effluent. The NPDES permit application required Kaiser to run a priority pollution scan for arsenic. It was not detected at a detection limit of 100 ppb. Ecology then ran a

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

reasonable potential analysis on the assumption that Kaiser's effluent contains arsenic at 100 ppb. Not surprisingly, the analysis found that the hypothetical arsenic in Kaiser's effluent could exceed the water quality standard of 0.14 ppb.

It is improper to assume that a compound not detected in effluent at a given detection limit is present in the effluent at the detection limit. Applying this practice to any toxic for which the water quality standard is lower than the detection limit would result in a determination that every effluent requires a water quality-based limit. Arsenic is not associated with the Tacoma Works or the aluminum reduction process, and Ecology has no lawful basis to require Kaiser to study arsenic concentrations in the receiving water.

Response # 39 – Arsenic is a pollutant of concern in the Tacoma industrial area and although not directly associated with the Tacoma Works or the associated aluminum reduction process, it may be present in discharges having input from potable water supplies, stormwater and groundwater in this area.

In Kaiser Tacoma's NPDES permit application they reported a value for arsenic of less than 100 ppb but may be as much as 100 times higher than the MDL and twenty times the QL for arsenic. The QL for arsenic is 5 ppb with Method 206.3. This is the method recommended by Ecology for metals analysis. Since Kaiser did not test at the recommended MDL and QL to demonstrate lower values and because of local environmental concerns of high arsenic levels in the Hylebos Waterway, it can not be precluded from the receiving water study.

Comment # 40 – The second reason why Ecology should not need a receiving water study is that Ecology recently completed one. *Metals Concentrations in Commencement Bay Waterways During 1997-1998*, Ecology Publication No. 99-309 (February 1999), reports on background metal concentrations in Commencement Bay and in Hylebos Waterway. The measurements include both filtered (dissolved) and unfiltered (total and total recoverable) samples, as well as near surface and near bottom samples. The data can be compared to the state's dissolved metals standards. The metals data can be used to calculate the dissolved to total recoverable ratios in the waterway for metals of concern. The metals data also show differences between deep water in Hylebos Waterway and surface water, which are relevant for Kaiser's effluent that is discharged to deep water and rises through the water column, thereby mixing with both deep and surface water.

Response # 40 – The Ecology study referenced by Kaiser does not include all the specific elements required by this receiving water study. The industrial section has included receiving water monitoring for metals in other permits or has received monitoring data volunteered by industry prior to incorporating the study into a permit. One set of data is not necessarily enough to comfortably establish background conditions. Ecology will not drop this study requirement.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Comment # 41 – Kaiser ran a “reasonable potential to exceed analysis” on copper, nickel and zinc, using (1) Kaiser’s monitoring data for copper and zinc from 1995 through October 1999, (2) permit application data on zinc in the effluent, (3) the background concentration data for copper, nickel and zinc in the Hylebos Waterway from the 1999 Ecology report, and (4) the procedure for making a reasonable potential determination described in Chapter VI of the Permit Writers Manual. Kaiser found that there is no reasonable potential to exceed the water quality standards for any of these metals, taking into account background receiving water concentrations. No further studies on these parameters are warranted.

Response # 41 – Ecology will require the study. Conditions may change during the permit term either in the receiving water or in Kaiser’s discharge. The conditions must be reevaluated at each permit reissuance. See Response # 40.

Comment # 42 – S6. Acute Toxicity – Ecology proposed to set an acute toxicity limitation based on WET test on fathead minnow conducted seven years ago. Draft Fact Sheet, page 14. As Ecology points out, the median survival rate for fathead minnow in six other tests conducted before and after the April 22, 1992 test was 97 percent. The April 22, 1992 test predates WAC ch. 173-205. As a result, the system to challenge anomalous results (WAC 173-205-090) did not even exist at the time of the test result in question.

The data set referenced in the Fact Sheet shows that subsequent testing, which covered seasonal extremes, showed passing results.

Subsequent to the referenced data collection period, Ecology (Randy Marshall) approached the aluminum industry to request its assistance in determining the cause of sporadic mortality that was occurring in bioassay tests conducted within the industry. Based upon the results of a cooperative data review and biological testing conducted by Parametrix with submittal to Ecology, it was determined by Ecology that their bioassay protocol needed to be modified to include ultraviolet light irradiation of the sample prior to biological testing. The single data point on which Ecology relies to justify an acute limit was conducted on effluent that was not irradiated. The huge contrast between the April 22, 1992 test and six other tests conducted within a year of the April 22nd test strongly suggest that the mortality recorded during the April 22nd test is not representative of the effluent.

For this reason, Kaiser respectfully requests that the acute toxicity limitations be deleted. The permit should require characterization testing during the first year of the permit and in a later year for permit renewal purposes.

Response # 42 – The smelters decided not to provide assistance to Randy Marshall. The Parametrix testing and work was paid for by Kalama Chemical and was specific for that facility. Ecology, per this comment, has reevaluated the test in question along with the additional tests submitted by Kaiser before and

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

after the comment period. Since the April 22, 1992 test was completed before the system to challenge anomalous results and the test may have qualified, Ecology will agree to this request. Since the Tacoma Works is not currently making aluminum, the characterization testing will be timed to be run during a normal operating schedule in the five year permit cycle.

Comment # 43 – Notwithstanding the above, if Ecology fails to delete the acute WET limit, Kaiser requests that the final paragraph of Condition S6.B be replaced with the language that Ecology and Intalco agreed upon to address the liability consequences of an effluent sample that fails an acute test:

If any acute toxicity test determines a statistically significant difference in survival between the control and the 10 percent effluent concentration (the ACEC) using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001), then the effluent has failed the whole effluent acute toxicity limit. The Permittee will be considered in compliance with all permit requirements for whole effluent acute toxicity so long as the requirements in subsection C are being met to the satisfaction of the Department. If the difference in the survival between the control and the 10 % effluent concentration is less than 10 %, the hypothesis test shall be conducted at the 0.01 level of significance.

Response # 43 – Ecology agrees to modify the permit with the new boilerplate language, which should eliminate Kaiser's concern.

Comment # 44 – Condition S6.D.1 should be amended to identify "the most recent Department of Ecology specifications regarding format and content...". The Intalco permit cites Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, for this purpose.

Response # 44 – Ecology agrees to modify the permit with the new boilerplate language, which should eliminate Kaiser's concern.

Comment # 45 – Condition S6.D.4 and 5 cite "the EPA manual listed in Subsection B" as guidance for the identification of quality assurance criteria and control water specifications. That manual should be cites *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms*, EPA/600/4-89/001 (March 1989). Please cite the section or page of the manual that contains the procedures Ecology wants Kaiser to follow.

Response # 45 – Ecology agrees to modify the permit with the new boilerplate language, which should eliminate Kaiser's concern.

Comment # 46 – S7. Chronic Toxicity – Conditions S7 present the same problem as Condition S6. Ecology once again proposes to set a chronic limit based upon

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

one anomalous test on ceriodaphnia that predates WAC ch. 173-405 and the refinement of the bioassay protocol to eliminate false positive mortality spikes. Fact Sheet at 15. For the reasons stated above, Kaiser respectfully requests that the chronic toxicity limitations be deleted. The permit should require that characterization testing during the first year of the permit and in a later year for permit renewal purposes.

Response # 46 – Ecology, per this comment, has reevaluated the test in question along with the additional tests submitted by Kaiser before and after the comment period. Since the test was completed before the system to challenge anomalous results and the test may have qualified, Ecology will agree to this request. Since the Tacoma Works is not currently making aluminum, the characterization testing will be timed to be run during a normal operating schedule in the five year permit cycle.

Comment # 47 – The reference to “subsection A, above” in S7.B should state “listed below”.

Response # 47 – Ecology agrees to modify the permit with the new boilerplate language, which should eliminate Kaiser’s concern.

Comment # 48 – The second reference to “subsection C” in S7.C should state “subsection B.”

Response # 48 – Ecology agrees to modify the permit with the new boilerplate language, which should eliminate Kaiser’s concern.

Comment # 49 – Condition S7.D.1 should reference Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, instead of “the most recent Department of Ecology specifications regarding format and content.”

Response # 49 – Ecology agrees to modify the permit with the new boilerplate language, which should eliminate Kaiser’s concern.

Comment # 50 – Condition S7.D.3 and 4 refer to “the EPA manual listed in Subsection B” as guidance for the identification of quality assurance criteria and control water specifications. That manual should be cited as *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms*, EPA/600/4-89/001 (March 1989). Please cite the section or page of the manual that contains the procedures Ecology wants Kaiser to follow.

Response # 50 – Ecology agrees to modify the permit with the new boilerplate language, which should eliminate Kaiser’s concern.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Comment # 51 – S8 Outfall Evaluation – The phrase “on or before October 1, 2002” should be deleted from this condition, so that Kaiser can comply with the instructions to submit the report as part of the permit renewal application process.

Response # 51 – Ecology will include the appropriate date in the issued permit to reflect the timing required for the permit renewal application.

Comment # 52 – S9 Stormwater Pollution Prevention Plan – The submission deadlines in S9.A and B are obsolete. They should be tied to the date of the permit issuance. See condition S9 in the Intalco permit.

Response # 52 – Ecology will include the appropriate date in the issued permit.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

GENERAL RESPONSE TO COMMENTS # 53 TO 63:

Kaiser makes numerous comments for differences in the General Conditions of this proposed permit and previous permits issued to other smelters. Ecology refined the NPDES permit boilerplate in 1997 and which included a number of changes and refinements to the General Conditions. Ecology did not make these changes specific for the Kaiser Tacoma's permit, but prior to the time Kaiser Tacoma's permit was being developed, the new boilerplate went into effect. Intalco, Vanalco and Alcoa/Wenatchee permits were developed using the previous boilerplate. The Department of Ecology has been delegated by EPA, under 40 CFR Part 123, to implement the NPDES permitting program in Washington State. 40 CFR 123.25 lists the provisions of 40 CFR 122 and says "In all cases, States are not precluded from omitting or modifying any provisions to impose more stringent requirements:". In the following comments (# 53 to 63), Kaiser has cited provisions listed under 40 CFR 122. Footnotes to the provisions under 123.25 says, "States need not implement provisions identical to the above listed provisions. Implementation provisions must, however, establish requirements at least as stringent as the corresponding listed provision. While States may impose more stringent requirements, they may not make one requirement more lenient...". Ecology in changing these General Conditions has not been less stringent than the federal rules in parts 122 and 123.

Comment # 53 – G1 Signatory Requirements – Ecology proposes to amend the boilerplate language that it has employed in countless NPDES permits. With one exception Kaiser does not object to the amendments, but recommends that the first sentence of G1 should continue to state that applications and reports shall be signed and certified "in accordance with the provisions of 40 CFR 122.22." Without this citation EPA may object to the current version.

Response # 53 – Ecology denies this request. See General Response to Comment # 53 to # 63 above.

Comment # 54 – G1.A goes beyond the requirements of both 40 CFR 122.22(a) and WAC 173-220-040(5), by specifying the type of corporate officer who may sign a permit application. This amendment conflicts with the WAC and must be deleted. Any responsible corporate officer may sign a permit application, per WAC 173-220-040(5). That includes the plant manager, per 40 CFR 122.22(a)(1).

Response # 54 – Ecology does not agree this is conflict of WAC 173-220-040(5) and will not change the General Condition. See General Response to Comment # 53 to # 63 above.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Comment # 55 – G3 Permit Actions – This condition is a rewrite of standard condition G8, Permit Modification. Condition G8 was used without variation in the Wenatchee, Intalco and Vanalco permits. What prompted Ecology to alter it for the Tacoma Works?

Response # 55 – See General Response to Comment # 53 to # 63 above.

Comment # 56 – The “revised” version would (a) eliminate the notice and public hearing provided by G8 prior to modification or revocation of a permit and (b) authorize Ecology to modify or revoke the permit for any reason. It conflicts with 40 CFR 122.62 and 122.64, both of which carefully define the circumstances under which a permitting authority may reopen a permit, and the procedure for doing so. The proposed language is both unfair to the permittee and unlawful. Ecology should delete G3, in favor of the standard Permit Modification language contained in Condition G8 of the Intalco, Vanalco and Wenatchee permits.

Response # 56 – This does not eliminate public notices, public hearings, or appeals. Ecology is authorized to make permits more stringent. See General Response to Comment # 53 to # 63 above.

Comment # 57 – G4 Reporting A Cause For Modification – This condition is a rewrite of standard Condition G9, in the Wenatchee, Intalco and Vanalco permits. The “revised” version would require Kaiser automatically to submit a permit amendment application, “engineering plans and reports,” whenever “a material change in the quantity or type of discharge is anticipated which is not specifically authorized by this permit.” By failing to reference the causes for the modification listed in 40 CFR 122.62 the condition fails to meet the minimum requirements of federal law. By requiring engineering plans for any change in the discharge requires a modification of the wastewater treatment system. Condition G4 should be deleted, in favor of the standard Reporting language contained in Condition G9 of the Wenatchee, Intalco and Vanalco permits.

Response # 57 – Ecology is authorized to make permits more stringent. See General Response to Comment # 53 to # 63 above.

Comment # 58 – G5 Plan Review Required – This condition is a rewrite of standard Condition G11, in the Intalco, Wenatchee and Vanalco permits. The new language directs the permittee to follow the procedures in WAC ch. 173-240, but imposes a schedule that conflicts with the schedules contained in this chapter. Condition G5 should be deleted, in favor of the standard Plan Review language contained in Condition G11 of the other smelter permits.

Response # 58 – The schedules do not conflict, however, G5 suggests (should be) submittals 180 day prior to planned construction versus “at least thirty days” prior to the time approval is desired in WAC 173-240-110. Ecology will not delete Condition G5.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Comment # 59 – G8 Permit Transfer – Ecology did not include permit transfer language in the Intalco, Vanalco or Wenatchee permits. WAC 173-220-200 fully describes the procedure for transfer of permits. There is no good reason to include these rules in the Tacoma permit. Condition G8 should be deleted.

Response # 59 – This was added to clarify how transfer of permits work in all new and newly reissued NPDES permits. Ecology will not delete G8. See General Response to Comment # 53 to # 63 above.

Comment # 60 – G14 Payment of Fees – The Wenatchee, Intalco and Vanalco permits all contained a standard condition G15, which states that “The Department may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.” In the Tacoma permit Ecology proposes to add an additional sentence, which states: “The Permittee shall submit payment of fees associated with this permit as assessed by the Department.” What purpose does this new sentence serve?

Response # 60 – This is a refinement of G14 for all new and newly reissued NPDES permits. See General Response to Comment # 53 to # 63 above.

Comment # 61 – Is Ecology planning to assess fees on Kaiser other than those imposed pursuant to WAC ch. 173-224? The new sentence should be deleted, so that the Tacoma permit contains the same payment of fees language found in the other smelter permits.

Response # 61 – No, the fees are established by Chapter 173-224 WAC. Ecology will not delete this sentence. See General Response to Comment # 53 to # 63 above.

Comment # 62 – G15 Penalties for Violating Permit Conditions – This condition has no counterpart in the Wenatchee, Intalco or Vanalco permits. It simply restates verbatim the civil and criminal sections from RCW 90.48.140 and 144. Given that Condition G15 imposes no duties on the permittee, and that it simply repeats language found in the RCW, there is no good reason to include the condition in an NPDES permit. G15 should be deleted.

Response # 62 – This was added to have the civil and criminal penalties language in all new and newly reissued NPDES permits. Ecology will not delete G15. See General Response to Comment # 53 to # 63 above.

Comment # 63 – WAC 173-220-130 Finding – WAC 173-220-130(d)(2) states that “Ecology shall make a finding that any discharge authorized by the permit will not violate applicable water quality standards.” The Tacoma permit does not include this finding. Kaiser requests that Ecology include this mandatory finding in the permit.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Response # 63 – Kaiser Tacoma’s fact sheet states “that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards”. It as states “This proposed permit meets all statutory requirements for authorizing a wastewater discharge...”. Ecology denies this request. There is no requirement in the regulation that this finding be included in the text of the permit. However, the issuance of the permit along with the fact sheet supports the inference that this finding has been made by Ecology.

Comment # 64– The Department of Ecology has dropped Kaiser’s monitoring requirement for copper at outfall 001 in the draft permit even though the maximum daily value of copper discharged at this outfall is 0.66lb/day/0.05mgL. It has also dropped Kaiser’s effluent limitation and monitoring requirements for nickel at outfall 001 even though the maximum daily value of nickel at this outfall is 0.43lb/day/0.03mgL.

The decision to eliminate these current permit requirements were based on a reasonable potential analysis which assumed that because there is no valid ambient background data available for copper and nickel the background values of these parameters were zero. Given the number of marinas, boatyards and shipyards in the Hylebos Waterway and the historic contamination of this area, I question the validity of the zero background assumption particularly for copper.

I request that the draft permit be modified to reinstate the copper monitoring requirement and the nickel effluent limitation and monitoring requirement from the current permit.

Response # 64 – Per your comment, Ecology has rerun the reasonable potential analysis for copper and nickel 1.) using sampling analysis submitted with Kaiser’s application for renewal of the NPDES permit [maximums of 0.046 mg/l and 0.030 mg/l respectively], 2.) using Ecology’s Reasonable Potential Calculation, latest version Tsdcal9.xls, and 3.) using the maximum ambient concentration from Commencement Bay in a report from Battelle dated February 1998. With this data set, copper and nickel still do not have the reasonable potential to exceed the Marine Water Quality Standard. Limits and monitoring are not required based on this information. Kaiser is required to analyze for copper and nickel in the receiving water study, with priority pollutant testing and with their application for renewal of the next permit.

Comment # 65 – The purpose of this letter is to provide public comment on Draft NPDES permit # 000093-1 for Kaiser Aluminum and Chemical Corporation, Tacoma Works. This Kaiser facility discharges stormwater and industrial wastewater to the Hylebos Waterway in Commencement Bay. Superfund cleanup of the Hylebos Waterway is scheduled to be completed during this NPDES permit cycle, and Citizens for a Healthy Bay wants to ensure that the waterway does not become recontaminated by ongoing discharges.

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

Citizens for a Healthy Bay is an environmental non-profit organization representing 850 members. Our mission is to clean up, restore, and protect Commencement Bay. Kaiser has violated its permit requirements for several parameters multiple times during the last year and we find no reason to loosen any requirements of the existing NPDES permit. Ecology should take enforcement actions when permit requirements are not met. By not penalizing violators, Ecology is allowing industries to unfair profit from pollution.

There are four specific issues we would like to address in this new permit: pH excursions; repeated missing samples from outfall 003, 004, and 005; omissions of copper (Cu) and nickel (Ni) from the parameters to be monitored in the new permit; and the total quantity of aluminum (Al) being discharged to the waterway.

The existing pH standard of 6-9 must continue to be closely monitored and enforced. The upper pH standard of 9 was violated in April, May, June, and July 1999, but no enforcement action was taken. We understand that an AKART study was ordered and planning and design are currently underway for installation of a new, improved treatment system that will be completed on or before October 20, 2001. We insist that Kaiser be required to meet the pH standard in its discharge and be kept accountable for the violations of its permit.

Response # 65 – Ecology agrees with you and as part of the enforcement action for pH exceedances in 1999, Ecology is requiring the improvement to the treatment system as you have noted.

Comment # 66 – **Outfalls 003, 004, and 005 must be sampled as mandated in the existing permit.** Kaiser failed to sample these three outfalls in April, May, June and July 1999. There was more than enough rainfall during these months to enable sampling of the outfalls. We would like to see Ecology ensure future monitoring of these outfalls and take enforcement action in response to Kaiser's monitoring lapse.

Response # 66 – The language in this proposed permit has defined the storm event to be sampled. If such an event occurs they are required to sample.

Comment # 67 – **Kaiser should continue to monitor copper and nickel concentrations in outfall 001.** Copper is a constituent of concern in the Superfund cleanup of the Hylebos Waterway. The long-term loading of copper in the waterway is a cause for continued concern because of toxicity to aquatic organisms. Washington's chronic water quality standard for copper in marine waters is 0.003 parts per million. Concentrations of copper in outfall 001 were between 0.016 and 0.022 parts per million from November 1998 through March 1999. A nickel excursion also occurred in March 1999. Because Kaiser has had problems with its copper discharges in the past, outfall 001 could contribute to

**Response to Comments-Kaiser Tacoma NPDES Permit WA 00093-1
October 10, 2001**

recontamination of the Hylebos Waterway after the Superfund cleanup is completed.

For this reason, copper and nickel should not be dropped from the parameters to be monitored. Instead, a copper limit should be established and enforced by Ecology.

Response # 67 – Your information is correct, however, with the current information available the copper concentration will be below the Marine Water Quality Standard. Ecology is not aware of a nickel excursion in March 1999. See Response # 64.

Comment # 68 – **The allowable amount of aluminum discharge to the waterway must be enforced.** Kaiser has routinely discharged up to 100 pounds per day from outfall 001, in violation of its daily maximum discharge limit of 50 pounds per day. As part of the AKART studies and plans, Kaiser must work to decrease the amount of aluminum regularly being discharged to the waterway and come into compliance with its existing permit.

Response # 68 – The AKART studies and plans, along with the modification of the treatment system, should allow Kaiser to operate in compliance with the permit limits for the daily maximum and monthly average discharge of aluminum.